

**Amendments to the Specification:**

Page 1, after the Title, please insert the following paragraph:

This application is a National Stage application of PCT/JP2003/016034, filed December 15, 2003,  
20 which claims priority from Japanese patent application JP 2002-364405, filed December 16, 2002. The  
entire contents of each of the aforementioned applications are incorporated herein by reference.

Amend the paragraph on page 21, lines 15-16, as follows:

~~Fig. 4 is a view~~ Figs. 4A and 4B are views showing a transistor structure according to an example;

25

Amend the paragraphs on page 23, lines 7-20, as follows:

~~Fig. 28 is a view~~ Figs. 28A and 28B are views showing a transistor manufacturing method  
according to an example;

30

~~Fig. 29 is a view~~ Figs. 29A and 29B are views showing a transistor manufacturing method

according to an example;

~~Fig. 30 is a view~~ Figs. 30A and 30B are views showing a transistor manufacturing method  
according to an example;

~~Fig. 31 is a view~~ Figs. 31A and 31B are views showing a transistor manufacturing method  
according to an example;

35

~~Fig. 32 is a view~~ Figs. 32A and 32B are views showing a transistor manufacturing method  
according to an example;

~~Fig. 33 is a view~~ Figs. 33A and 33B are views showing a transistor manufacturing method  
according to an example;

40

~~Fig. 34 is a view~~ Figs. 34A and 34B are views showing a transistor manufacturing method  
according to an example;

Amend the paragraph on page 25, lines 3-12, as follows:

Referring to ~~Figs. 28 to 30~~ Figs. 28A through 30B, a method of manufacturing HJFET according to Example 1 will be described below. At first, the semiconductor is 45 grown on the substrate 10 made of SiC, e.g., by a molecular beam epitaxy (MBE) growth method. Similarly, the buffer layer 11 (film thickness of 20 nm) made of undoped AlN, the channel layer 12 (film thickness of 2  $\mu$ m) made of undoped GaN, and the AlGaN electron supply layer 13 (film thickness of 25 nm) made of undoped  $\text{Al}_{0.2}\text{Ga}_{0.8}\text{N}$  are laminated in the order from the substrate side, which obtains the 50 semiconductor layer structure (Fig. 28A).

Amend the paragraph beginning on page 25, line 13, and ending on page 26, line 2, as follows:

An inter-element separation mesa (not shown) is formed by etching a part of the epitaxial layer structure until the GaN channel layer 12 is exposed. Then, the source electrode 1 and the drain electrode 3 55 are formed on the AlGaN electron supply layer 13 by evaporating metal such as Ti/Al, and the ohmic contact is secured by performing anneal at 650°C (Fig. 28B). Then, the SiN film 21 (film thickness of 50 nm) is formed by a plasma CVD method or the like. The SiO<sub>2</sub> film 22 (film thickness of 150 nm) is further formed on the SiN film 21 by a normal-pressure CVD method or the like (~~Fig. 29C~~ Fig. 29A). An opening, in 60 which the AlGaN electron supply layer 13 is exposed, is provided by etching a part of the SiN film 21 and the SiO<sub>2</sub> film 22 (~~Fig. 29D~~ Fig. 29B). A gate metal 31 made of Ni/Au and the like is evaporated on the exposed AlGaN electron supply layer 13 by using a photo resist 30, and the Schottky-contact gate electrode 2 having the field plate portion 5 is formed (~~Figs. 30E and 30F~~ Figs. 30A and 30B). Thus, HJFET shown in Fig. 1 is produced.

65 Amend the paragraph on page 36, lines 1-10, as follows:

Referring to ~~Figs. 31 to 34~~ Figs. 31A to 34B, the method of manufacturing HJFET according to Example 4 will be described below. At first, the semiconductor is grown on the substrate 10 made of SiC, e.g., by the molecular beam epitaxy (MBE) growth method. Similarly, the buffer layer 11 (film thickness of

20 nm) made of undoped AlN, the channel layer 12 (film thickness of 2  $\mu\text{m}$ ) made of undoped GaN, and the  
70 AlGaN electron supply layer 13 (film thickness of 25 nm) made of undoped  $\text{Al}_{0.2}\text{Ga}_{0.8}\text{N}$  are laminated in the  
order from the substrate side, which obtains the semiconductor layer structure (Fig. 31A).

Amend the paragraph beginning on page 36, line 11, and ending on page 37, line 3, as follows:

Then, the inter-element separation mesa (not shown) is formed by etching a part of the epitaxial  
75 layer structure until the GaN channel layer 12 is exposed. Then, the source electrode 1 and the drain  
electrode 3 are formed on the AlGaN electron supply layer 13 by evaporating the metal such as Ti/Al, and  
the ohmic contact is secured by performing the anneal at 650°C (Fig. 31B). Then, the SiN film 21 (film  
thickness of 50 nm) is formed by the plasma CVD method or the like (Fig. 32C Fig. 32A). Then, the  
opening in which the AlGaN electron supply layer 13 is exposed is provided by etching a part of the SiN film  
80 21 (Fig. 32D Fig. 32B). The SiO<sub>2</sub> film 22 (film thickness of 150 nm) is formed over the substrate by the  
normal-pressure CVD method or the like so that the opening is embedded (Fig. 33E Fig. 33A). Then, the  
opening in which the AlGaN electron supply layer 13 is exposed is provided by etching a part of the SiO<sub>2</sub>  
film 22 (Fig. 33F Fig. 33B). Then, the gate metal 31 made of Ni/Au and the like is evaporated on the  
exposed AlGaN electron supply layer 13 by using the photo resist 30, and the Schottky-contact gate electrode  
85 2 having the field plate portion 5 is formed (Figs. 34G and 34H Figs. 34A and 34B). Thus, HJFET shown in  
Fig. 1 is produced.